

**HARDWARE-ASSISTED METHOD FOR THREAD SCHEDULING  
USING DATA CACHE LOCALITY**

**ABSTRACT OF THE DISCLOSURE**

A method is provided for scheduling threads in a  
5 multi-processor system. In a first structure thread ids are  
stored for threads associated with a context switch. Each thread  
id identifies one thread. In a second structure entries are  
stored for groups of contiguous cache lines. Each entry is  
arranged such that a thread id in the first structure is capable  
10 of being associated with at least one contiguous cache line in at  
least one group, the thread identified by the thread id having  
accessed the at least one contiguous cache line. Patterns are  
mined for in the entries to locate multiples of a same thread id  
that repeat for at least two groups. Threads identified by the  
15 located multiples of the same thread id are mapped to at least  
one native thread, and are scheduled on the same processor with  
other threads associated with the at least two groups.